



Box 500  
IFW  
Docket No.: 1254-0299PUS1  
(PATENT)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Takaji Wakita et al.

Application No.: 10/558,155

Confirmation No.: 6809

Filed: November 23, 2005

Art Unit: Not Yet Assigned

For: A NUCLEIC ACID CONSTRUCT  
CONTAINING A NUCLEIC ACID DERIVED  
FROM THE GENOME OF HEPATITIS C  
VIRUS (HCV) OF GENOTYPE 2A, AND A  
CELL HAVING SUCH NUCLEIC ACID  
CONSTRUCT INTRODUCED THEREIN

Examiner: Not Yet Assigned

### RESPONSE TO NOTIFICATION TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE AND/OR AMINO ACID SEQUENCE DISCLOSURES

MS PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Notification to Comply with Requirements for Patent Applications Containing Nucleotide and/or Amino Acid Sequence Disclosures dated May 2, 2007, Applicant respectfully submits:

- Attached is a copy of the Notification to Comply with Requirements for Patent Applications Containing Nucleotide and/or Amino Acid Sequence Disclosures.
- Under the provisions of 37 C.F.R. §§ 1.41(c) and 1.53(f), attached hereto is the executed Declaration of the inventor(s) ( original  photocopy), necessary for completing the filing requirements in connection with the above-identified application.

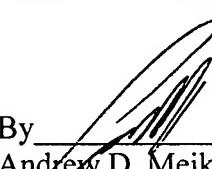
- Under the provisions of 37 C.F.R. §§ 1.41(c) and 1.53(f), attached hereto is the executed Declaration that was attached to the specification at the time of execution. The attached specification is a true copy of the specification that was filed in the U.S. Patent and Trademark office on United States of America, including any amendments thereto (if applicable) filed on even date therewith.
- The undersigned hereby declares that "Attorney Docket No. 1254-0299PUS1" on page 1 of the attached inventors' Declaration, corresponds to Appl. No. 10/558,155, filed November 23, 2005, entitled "A NUCLEIC ACID CONSTRUCT CONTAINING A NUCLEIC ACID DERIVED FROM THE GENOME OF HEPATITIS C VIRUS (HCV) OF GENOTYPE 2A, AND A CELL HAVING SUCH NUCLEIC ACID CONSTRUCT INTRODUCED THEREIN."
- Attached is an English language translation of the above-identified application that was filed in a foreign language, which should be used as the copy for examination purposes.
  - See the attached Translator's Verification; or
  - The undersigned states that the English translation attached hereto is a true and correct translation of the application as originally filed in a foreign language.
- Attached are **0** sheet (s) of drawings. Please substitute these replacement drawings for the corresponding **0** sheet(s) of drawings on file in the above-identified application.
- Attached is a Preliminary Amendment.
- Attached are substitute claims commencing on a separate sheet in accordance with 37 C.F.R. § 1.75(h).
- Attached is a substitute abstract commencing on a separate sheet in accordance with 37 C.F.R. § 1.72(b).

- Attached is the paper and CRF disk copy of the Sequence Listing.
- Attached an Amendment.
- Attached is a Claim for Priority document.
- Attached is a Supplemental Application Data Sheet (ADS).
- Submitted concurrently herewith **under separate cover** for recording is an Assignment.
- Attached is a Petition for Extension of Time.
- Attached hereto is the fee transmittal listing the required fees.

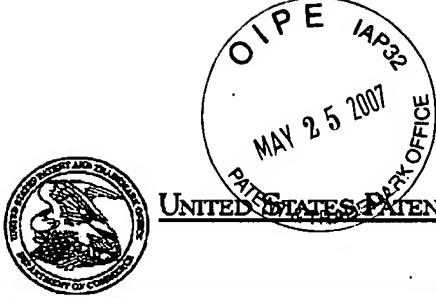
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Dated: May 25, 2007

Respectfully submitted,

By   
Andrew D. Meikle  
Registration No.: 32,868  
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Suite 100 East  
P.O. Box 747  
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(703) 205-8000  
Attorney for Applicant

Attachment(s)



ADM

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

|  |                       |                               |
|--|-----------------------|-------------------------------|
| U.S. APPLICATION NUMBER NO.  | FIRST NAMED APPLICANT | ATTY. DOCKET NO.              |
| 10/558,155   | Takaji Wakita         | 1254-0299PUS1                 |
|  |                       | INTERNATIONAL APPLICATION NO. |
|  |                       | PCT/JP03/15038                |
| 2292<br>BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |                       | I.A. FILING DATE              |
|  |                       | 11/25/2003                    |
|  |                       | PRIORITY DATE                 |
|  |                       | 05/26/2003                    |
| CONFIRMATION NO. 6809  |                       |                               |
| 371 FORMALITIES LETTER   |                       |                               |
| <br>*OC000000023623591*  |                       |                               |

*Quinn Isle*  
**DOCKETED**  
*Sequence listing*  
*11-2-2007*

Date Mailed: 05/02/2007

### NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Priority Document
- Copy of the International Application filed on 11/23/2005
- English Translation of the I.A filed on 11/23/2005
- Copy of the International Search Report filed on 11/23/2005
- Copy of IPE Report filed on 11/23/2005
- Preliminary Amendments filed on 11/23/2005
- Information Disclosure Statements filed on 11/23/2005
- Biochemical Sequence Diskette filed on 01/03/2007
- Oath or Declaration filed on 01/03/2007
- Biochemical Sequence Listing filed on 01/03/2007
- U.S. Basic National Fees filed on 11/23/2005
- Priority Documents filed on 11/23/2005
- Specification filed on 11/23/2005
- Claims filed on 11/23/2005
- Abstracts filed on 11/23/2005
- Drawings filed on 11/23/2005
- Paper nucleotide sequence listings filed on 11/23/2005

Applicant's response filed 01/03/2007 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 11/03/2006 have not been completed:

- The paper or compact disc copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e). Applicant must provide a substitute paper or compact disc copy of the "Sequence Listing", as well as an amendment specifically directing its entry into the application OR a substitute computer readable form (CRF) copy of the "Sequence Listing". These two items must be the same. Applicant must also provide a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR

1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000).

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d). Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If applicant desires the sequence listing in the instant application to be identical with that of another application on file in the U.S. Patent and Trademark Office, such request in accordance with 37 CFR 1.821(e) may be submitted in lieu of a new CRF.

**Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).**

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

**For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:**

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ [ebc@uspto.gov](mailto:ebc@uspto.gov)**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.  
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPP.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

**If you are not using EFS-Web to submit your reply, you must include a copy of this notice.**

ANITA D JOHNSON

Telephone: (703) 308-9140 EXT 226

**PART 1 - ATTORNEY/APPLICANT COPY**

| U.S. APPLICATION NUMBER NO. | INTERNATIONAL APPLICATION NO. | ATTY. DOCKET NO. |
|-----------------------------|-------------------------------|------------------|
| 10/558,155                  | PCT/JP03/15038                | 1254-0299PUS1    |

**STIC Biotechnology Systems Branch**

**RAW SEQUENCE LISTING**  
**ERROR REPORT**



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

10/558,155  
T-200  
3/15/07

Source:

Date Processed by STIC:

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

| <u>ERROR DETECTED</u>   | <u>SUGGESTED CORRECTION</u>   | <u>SERIAL NUMBER:</u> <u>10558,155</u> |
|---|---|--|
| <b>ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE</b> |   |  |
| 1 <input type="checkbox"/> Wrapped Nucleic<br>Wrapped Aminos  | The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."  |  |
| 2 <input type="checkbox"/> Invalid Line Length  | The rules require that a line not exceed 72 characters in length. This includes white spaces.   |  |
| 3 <input type="checkbox"/> Misaligned Amino<br>Numbering  | The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.   |  |
| 4 <input type="checkbox"/> Non-ASCII  | The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.  |  |
| 5 <input type="checkbox"/> Variable Length  | Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>~<223> section that some may be missing.  |  |
| 6 <input type="checkbox"/> PatentIn 2.0<br>"bug"  | A "bug" in PatentIn version 2.0 has caused the <220>~<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>~<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>~<223> sections for Artificial or Unknown sequences.   |  |
| 7 <input type="checkbox"/> Skipped Sequences<br>(OLD RULES)   | Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:<br>(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)<br>(xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>This sequence is intentionally skipped<br><br>Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences. |  |
| 8 <input type="checkbox"/> Skipped Sequences<br>(NEW RULES)   | Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:<br><210> sequence id number<br><400> sequence id number<br>000  |  |
| 9 <input type="checkbox"/> Use of n's or Xaa's<br>(NEW RULES)   | Use of n's and/or Xaa's have been detected in the Sequence Listing.<br>Per 1.823 of Sequence Rules, use of <220>~<223> is MANDATORY if n's or Xaa's are present.<br>In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.  |  |
| 10 <input type="checkbox"/> Invalid <213><br>Response   | Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>~<223> section is required when <213> response is Unknown or is Artificial Sequence   |  |
| 11 <input type="checkbox"/> Use of <220>  | Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.<br>Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.<br>(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)   |  |
| 12 <input type="checkbox"/> PatentIn 2.0<br>"bug"   | Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.   |  |
| 13 <input type="checkbox"/> Misuse of n/Xaa   | "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid  |  |



IFWP

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:32

Input Set : A:\2007-01-03 1254-0299PUS1.txt  
Output Set: N:\CRF4\03152007\J558155.raw

3 <110> APPLICANT: WAKITA, Takaji  
 4 KATO, Takanobu  
 5 DATE, Tomoko  
 7 <120> TITLE OF INVENTION: A NUCLEIC ACID CONSTRUCT CONTAINING A NUCLEIC ACID DERIVED  
 8 FROM THE GENOME OF HEPATITIS C VIRUS (HCV) OF GENOTYPE 2a,  
 9 AND A CELL HAVING SUCH NUCLEIC ACID CONSTRUCT INTRODUCED THEREIN  
 11 <130> FILE REFERENCE: 1254-0299PUS1  
 13 <140> CURRENT APPLICATION NUMBER: US 10/558,155  
 14 <141> CURRENT FILING DATE: 2005-11-23  
 16 <150> PRIOR APPLICATION NUMBER: PCT/JP2003/015038  
 17 <151> PRIOR FILING DATE: 2003-11-25  
 19 <150> PRIOR APPLICATION NUMBER: JP 2003-148242  
 20 <151> PRIOR FILING DATE: 2003-05-26  
 22 <150> PRIOR APPLICATION NUMBER: JP 2003-329115  
 23 <151> PRIOR FILING DATE: 2003-09-19  
 25 <160> NUMBER OF SEQ ID NOS: 41  
 27 <170> SOFTWARE: PatentIn Ver. 2.1  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 8024  
 31 <212> TYPE: RNA  
 32 <213> ORGANISM: Artificial Sequence  
 34 <220> FEATURE:  
 35 <223> OTHER INFORMATION: Description of Artificial Sequence: replicon  
 37 <400> SEQUENCE: 1  
 38 accugccccc aauaggggcg acacuccggc augaaucacu ccccugugag gaacuauccg 60  
 39 cuucaegcag aaagcgccua gcoauggcgua uaguauagagu guuguacagc cuccaggccc 120  
 40 cccccccccg ggagagccau aquggucugc ggaaccggug aguacaccgg aauwgccggg 180  
 41 aagacugggu ccuuucuugg auaaacccac ucuauggccc gccauuuggg cgugcccccg 240  
 42 caagacugcu agccgaguag cguuggguug cggaaaggccu ugugguacug ccugauaggg 300  
 43 cgcuugcgag ugcggcgga ggucueguag accgugcacc augagcaca auccuaaacc 360  
 44 ucaaagaaaa accaaaagaa acaccaaccg ucgccccaaug auugaacaag augauugca 420  
 45 cgcagguucu cggccgcuu ggguggagag gcuauucggc uaugacuggg cacaacagac 480  
 46 aaucggccu ucugauggcg cggugwiccg gcugucagcg cagggggccg cggwicuwii 540  
 47 ugucaagacc gaccugccg gugccugaa ugaacugcg gacgaggcag cggggcuauc 600  
 48 guggcuggcc acgacggggc uuccuugcgc acgugugcuc gacguuguca cugaaggggg 660  
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 50 uccugccgag aaugauucca ucaugcuga ugcuaugcg egcugcaua cgcuugaucc 780  
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 52 ggaagcggu cuugugcgauc aggaugaucu gacgaaagag caucaggggc ucggccagc 900  
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 55 cuguggccgg cugggugugg cggaccgcua ucaggacaua ggcuuggcua cccugugau 1080  
 56 ugcugaagag cuuggcggcg aauggcuga cgcuuccuc gugcuuucg guaucgcgc 1140

Does Not Comply  
Corrected Diskette Needed

Pls explain source  
of genetic material.

INVALID  
RESPONSE

Pls see  
item # 11

on  
error  
summary  
sheet.

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:32

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Output Set: N:\CRF4\03152007\J558155.raw

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60 aaccuggccc ugucuuucuug acgagcauuc cuaggggucu uuccccucuc gccaaaggaa 1380  
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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:32

Input Set : A:\2007-01-03 1254-0299PUS1.txt  
Output Set: N:\CRF4\03152007\J558155.raw

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 107 ugguuagcg uccagauccg accaccccg gggggccaccc gcuuugucgu caguggccug 4200  
 108 guggggcug ccgugggcag cauaggccug gguaggugc ugguggacau ccuggcagga 4260  
 109 uauggugcg gcauucggg ggcccucgc gcauuaaga ucaugucugg cgagaagccc 4320  
 110 ucuauuggaag auguaucaaa ucuacugccu gggauccugu cuccgggagc ccugguggug 4380  
 111 ggggucaucu gcgccggccau ucuggeccgc cacgugggac cgggggaggg cgogguccaa 4440  
 112 uggaugaaca ggcuuaugc cuuugcuucc agaggaaacc acguccccc uacucacuac 4500  
 113 gugacggagu cggaugcgc acagcgugug acccaacuac uggcucu uacuauaacc 4560  
 114 agccuacuca gaagacuca caauuggaua acugaggacu gccccauccc augcuccgg 4620  
 115 uccuggcucc ggcacgugug ggacugggu ugcaccaucu ugacagacuu caaaaauugg 4680  
 116 cugaccucua aauuguuccc caagcgecc ggcuuccu ucaucucuug uaaaaagggg 4740  
 117 uacaaggug uggggggcgg cactggcauc augaccacgc gcucccuug cggggccaaac 4800  
 118 aucucuggea augucggccu gggcucuaug gggcuuuaac cugcaugaaac 4860  
 119 accuggcagg ggccuuccu uaucaauugc uacacggagg gccagugcgc gcggaaaccc 4920  
 120 cccacgaacu acaagaccgc caucuggagg guggggccu cggagiacgc ggaggugacg 4980  
 121 cagcaugggu cguacuccua uguuacagga cugaccacug acaaucugaa aauuccuug 5040  
 122 caacuacuu cuccagaguu uuuuccugg guggacggug ugcagaucca uagguiiugca 5100  
 123 cccacaccaa aeeccuuuuu cgggaugag gucucguu uccuugggcu uaaauuccuau 5160  
 124 gcugucgggu cccagcuiucc cugugaacu gaccccgacg cagacguauu gagggucaug 5220  
 125 cuaacagauc cggcccaacaú cacggcggag acugccgc ggcgcuuggc acggggauca 5280  
 126 ccuccauctg aggccagcuc cucagugagc cagcuaucag cacoguogou gccccccacc 5340  
 127 ugcaccaccc acagcaacac cuauagacug gacauggugc augccacccu gcucauuggag 5400  
 128 ggccggugug cucagacaga gccugagucc agggugcccg uucuggacuu ucugagcc 5460  
 129 auggccgagg aagagagcga ccuuugagccc ucaauaccau cggagugcau gcucccccagg 5520  
 130 agcggguuuc cacgggcccui accggcuiugg gcacggccug acuacaaacc gccgcucug 5580  
 131 gaaucgugga ggaggccaga uuaccaaccc cccacccguug cugguugugc ucucuccccc 5640  
 132 cccaaagaagg ccccgacgccc ucccccuaagg agacccggc caguggggcu gagcgagage 5700  
 133 accauauacg aagccuccua gcaacuggcc auaacagacc uuggccagcc cccucgcage 5760  
 134 ggugauccg gcuccuccac gggggggggc gggggggccu gacgucuccu 5820  
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 136 ccuggagauc cggaccugga gucugauca gugacggccu aaccuucccc ccaggggggg 5940  
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 138 accgugugcu gcuccaugguc auacuccugg accggggcuc uaaaaacucc cuguagcccc 6060  
 139 gaagagggaaa aguugccaa uaaaaacccuug aquaacugc uguugcgaaua ccauaacaag 6120  
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 141 acgcaaguc ucgacgcccc uuaugacuca gcuuuaagg acauacacgcu agcgccuucc 6240  
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 147 gacauuacac aaaagccuac ucgccggua auggggccu ccauuggccu ccaguacucc 6600  
 148 ccugcccaac ggguggagua ucuuugaaa gcauggccgg aaaagaagga ccccaugggu 6660  
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 152 agacguugcc ggcgcagccgg ggugcuaacc acuagcaugg guacaccau cacaugcuau 6900  
 153 guagaagccc uagccggccug caagccugcg gggauaguuu cggccacaaau gcuugguau 6960  
 154 ggcaugacc uaguagucau cuuagaaagc caggggacug aggaggacga gggaaaccug 7020

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:32

Input Set : A:\2007-01-03 1254-0299PUS1.txt  
Output Set: N:\CRF4\03152007\J558155.raw

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156 gaaauaugacc uggagcuau aacaucuugu uccucaaaug ugucuguggc guugggccc 7140  
157 cggggccgccc gcagauacua ccugaccaga gaccaacca cuccacuogc cgggcuugcc 7200  
158 ugaaaacag uagacacuc cccaucaau ucauggcugg gaaacaucau ccaguauugc 7260  
159 ccaacccauau ggguucgcacau ggccuuaug acacacuucu ucuccauucu caugguccaa 7320  
160 gacacccugg accagaaccu caacuungag auguauggau caguauacuc cgugaauccu 7380  
161 uggaccuui cagccauau ugaggguuu caccggcuug acgcccuiuc uaugcacaca 7440  
162 uacutucacc acgaacugac ggggguggu ucagccccu gaaacuugg ggcgcaccc 7500  
163 cucaggugu ggaagagucg ggcucgcgca gucaggcgu cccuacuuc ceguggaggg 7560  
164 aaagccggccg uuuugccggc auaucuucu aauuggccgg ugaagaccaa gcuacaaacuc 7620  
165 acuccauugc cggaggcccg ccuacuggac uuauccaguu ggiucaccgu cggcgcggc 7680  
166 gggggcgaca uuuuucacag cgugucgcgc gccccacccc gcuacuucu cnuuggccua 7740  
167 cuuccuacu ucguaagggu agggcucuuc cuacuccccg cugguagag cgacacacac 7800  
168 uagguaacacu ccauagcuau cugiuuccuuu uuuuuuuuu uuuuuuuuu uuuuuuuuu 7860  
169 uuuuuuuuuu cuuuuuuuu uuuuucccuc uuuuucccu ucuacuua uuuuacuuic 7920  
170 uuuuuuggug gcuuccauuu agccuauuc acggcuacu gugaaagguc cgugagccg 7980  
171 augacugcag agagugccgu aacuggucuc ucugcagauc augu 8024

174 <210> SEQ ID NO: 2  
175 <211> LENGTH: 8024

176 <212> TYPE: RNA

177 <213> ORGANISM: Artificial Sequence

179 <220> FEATURE:

180 <223> OTHER INFORMATION: Description of Artificial Sequence: replicon

182 <400> SEQUENCE: 2

183 acceggccccu aauagggcg acacucggcc augaaucacu cccuugugag gaaucacuug 60  
184 cuucacgcag aaaggcucua gecauugcgu uaguaugagu gueguacagc cuccagggcc 120  
185 ccccccccg ggagggccau aguggucug ggaaccggug aguacacccg aauwgccggg 180  
186 aagacugggu ccuucuucuugg auaaaccac ucuaucccg gccauuuggg cgugccccc 240  
187 caagacuugc agccgagauag cgugggguug cgaaaggccu ugugguacug cugauaggg 300  
188 ugcuugcag ugcggggga ggucucguag accgugcacc augagcacaa aucccaaacc 360  
189 ucaaagaaaa accaaaagaa acacuaaccc ucgcccaaug auugaacaag augauugca 420  
190 cgaggguuuu cggccgcguu ggguggagag gcuauucggc uaugacuggg cacaacagac 480  
191 aauccggcugc ucugauugccg cggugiuucg gcuugucaggc cggugccuuu 540  
192 ugucaagacc gaccuguccg gugccugaa ugaacugcag gacgaggcag cggccuauc 600  
193 guggcuggec acgaacggcgg uuccuugegc acgugugcuc gacguuguca cugaaggggg 660  
194 aaggggacuugg cugcuauugg gcgaaagugcc ggggcaggau cuccugucu cucacuuge 720  
195 uccuucggag aaaguauucca ucauggcuga ugcuaugccg cggugcuaa cgcuugaucc 780  
196 ggcuacccu ccauucgacc accaaggcga acaucgcauc gagcggacac guacuggau 840  
197 ggaagccggu cuugcgauc aggauaucu ggacgaagg caucaggggc ucgccgcgc 900  
198 cgaacuguuu gccaggcuu aggccgcguu gcccgaogc gaggauucg ucugacacca 960  
199 uggegaugcc ugcuugccga auaucauggu gaaaaauggc cgcuuiucug gauucaugca 1020  
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201 ugcuugagag cuugggccgg aaugggcuga cgcuuiucuc ggcuuiucug guauegcgc 1140  
202 ucccgauucg cagcccaucg ccuucuauucg cciuucuugac gaguuuucu gaguuuuac 1200  
203 ccuucuccuc cccccccccc aacguuacug gccgaagccg cuuggaaaua ggcggugug 1260  
204 cguuugcua uauquuaau uccaccaaua ugcugcuiuu uggcaugug agggcccgga 1320  
205 aaccuggccc ugucuucuug acgagcauuc cuagggguu uucccucuc gccaaaggaa 1380  
206 ugcuaggcuc uguugauugc gugaaagguc caguuccu ggaagcucu ugaagacaaa 1440  
207 caacgucugu agcgacccu ugcaggcagc ggaacccccc accuggcac agugccucu 1500-

Same  
error

↑  
See item

# II on  
error

summary  
sheet

This type of errors shown exist throughout  
the Sequence Listing. Please check subsequent  
sequences for similar errors.

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:32

Input Set : A:\2007-01-03 1254-0299PUS1.txt  
Output Set: N:\CRF4\03152007\J558155.raw

208 gcggccaaaa gccaegugua uaagauacac cugcaaaggc ggcacaaccc cagugccacg 1560  
209 uugugaguuug gauaguugug gaaagaguca aauggcucuc cucaagcgua uacaacaagg 1620  
210 ggcugaagga ugcccagaag guaccccaau guaugggauc ugaucugggg ccucggugca 1680  
211 caugcuiuac auguguuuag ucgaggwuua aaaaacgcu aggccccccg aaccacgggg 1740  
212 acgguguuu cccuuuaaaaa acaccauaau accaaggccc ccauacccgc uacgcccag 1800  
213 cagacacgag gucucuuggg cucuaugug gugagcauga cggggcguga caagacagaa 1860  
214 caggccgggg agguccaau cccuuccaca gucacucagu cccuuccucgg aacaucuau 1920  
215 ucgggggcuc uuggactgu uuaccacgga gugggcaaca agacacuage cggcucgegg 1980  
216 ggccggguca cgcagauua cugagcgcc gagggggacu uggugccgg gcccagccu 2040  
217 ccuggggacca aaucuuuugga gccguguacg ugugggagccg ugcacugua uuuggucacg 2100  
218 cggAACGCGUG AUGUCAUCC GGCUCGAGA CGCGGGGACA AGGGGGAGC GCGUCUCC 2160  
219 ccgagacccc uuuucgaccuu gaaggggucc ucggggggac cugugcuiuug cccuagggc 2220  
220 cagcugcug gaaucuuccg ggcagcugug ugcucucgg guguggcuaa guccauagau 2280  
221 uucauccccg uugagacgcu cgacauacguc acgccccguc ccaccuuuag ugacaacagc 2340  
222 acaccaccaug cugugcccca gaccuaucag gugggguacu ugcacgcccc cacuggcagu 2400  
223 gaaaaaaagca ccaagguccc cqucgcguac gcccggccagg gguauaaagu cugggggcuc 2460  
224 aauccccucgg ugugccgac ccugggauuu gggggcguacu uguccaaggc acauggcauc 2520  
225 aaccuccaaca uuaggacugg agucagaacu gugacgaccg gggagcccau uacauacucc 2580  
226 acguauuggua aauuccucgc cgaugggggc ugcgcaggcg gcccuauga caucauaua 2640  
227 ugegaugaau gccacucugu ggaugcuaacc acuauucucg gcaucgggac aguuccuugac 2700  
228 caaggcagaga cagcggggc uggcuaacu guacuggcga cggcoacgccc ccccgggucg 2760  
229 gugacaacccc cccaucccaa uauagaggag guagccucg gacaggaggg ugagaucccc 2820  
230 uucauuggga gggcgwuucc cugucuuac aucaaggag ggaggcacuu gauuuucugc 2880  
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234 aacguagggc ucacccaggc cguagacuuu acggcugacc ccacccuac uauaaccaca 3120  
235 cagacugucc cgcaagacgc ugucucacgu agucagcggc gaggggcgac ggguagagga 3180  
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VERIFICATION SUMMARY  
PATENT APPLICATION: US/10/558,155

DATE: 03/15/2007  
TIME: 11:30:33

Input Set : A:\2007-01-03 1254-0299PUS1.txt  
Output Set: N:\CRF4\03152007\J558155.raw